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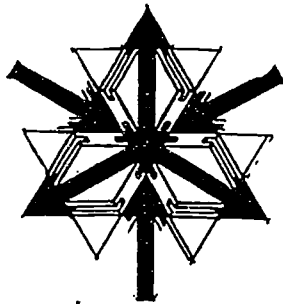
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ABSTRACT

This monograph presents abstracts of 29 papers that relate life-span research to the development of gifted and talented children. Sample topics include: attitudes about rural schools and programs for the gifted; social competence, self-esteem, and parent-child time and interaction in an advantaged subculture; helping families of gifted children interact with schools; determinants of underachievement among gifted and nongifted black students; differentiated assessment of self-concept; understanding the diversity and growth of talent in creative domains; the long-term development of giftedness and high competencies in children enriched in language during infancy; the power gamesmanship tactics of emotionally disturbed gifted children: four case studies; development of giftedness among siblings: a case study; performance-based versus standardized assessment of young gifted children; the Hollingworth longitudinal study; studies of giftedness in a third world setting; comparison of narrative language abilities in gifted/learning disabled and high-achieving gifted students; the Simon's Rock early college program; religious development of gifted individuals; early mentor relationships in the lives of eminent and creative adults; families of the gifted; social giftedness; early influences in the development of artistic talent; implications for females of male conceptions of abilities; second language learning and gifted children; and verbal giftedness and the development of relativistic thinking. (DB)

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The Third Annual
Esther Katz Rosen Symposium
on the
Psychological Development of
Gifted Children

**Relating Life-Span Research
to the Development of
Gifted and Talented Children**

Abstracts of Selected Papers

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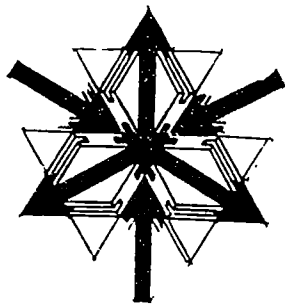
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University of Kansas
Lawrence, Kansas
February 19-20, 1993

The Esther Katz Rosen Symposium is made possible by the generous support of the American Psychological Foundation, the Merrill Advanced Studies Center, the Schiefelbusch Institute for Life-Span Studies, and the University of Kansas.

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Linguistic Creativity and Working Memory Tradeoffs
for Older Adults

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Abstract

Previous research has indicated that older adults suffer from an age-related deficit in working memory. This deficit has shown up in studies comparing the memory of older and younger adults and in language comprehension. Older adults have difficulty comprehending syntactically difficult sentences and prose passages. However, older adults are able to compensate for working memory deficits by taking advantage of linguistic features such as semantic constraints.

Very little research has been done comparing language production in young and older adults. In one very interesting study, Kemper (1988) found that stories told by older adults were rated as more interesting and complex (in terms of plot structure) than stories told by younger adults. Yet, a closer examination of the individual sentences within the stories revealed simpler syntactic structures for older adults and in the more complicated stories. Thus, Kemper suggested that older adults who have smaller working memories than younger adults face a tradeoff between producing complex, interesting speech and their working memory limitations. In order to produce complex stories, the tradeoff is simpler syntactic structures at the sentence level.

This project is intended to examine this tradeoff at the sentence level. Using a stem completion task, the burden on working memory can be manipulated through syntactic complexity of the stem. Subjects are asked to repeat the stem thereby loading working memory, and then asked to complete it. By examining complexity of the completion in the different memory conditions, this tradeoff can be tested.

An Information Processing Analysis of Academic Skill:
A Proposed Program of Research

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Abstract

Gifted children perform exceptionally well in school, and their academic skills develop more rapidly than academic skills of children who are not gifted. These facts beg for explanation. Were there an integrated theoretical account of these facts, research could progress toward instructionally increasing academic skill and accelerating its development. My purpose in the paper I propose for the Esther Katz Rosen Symposium are (a) to describe a theory of general strategy use, academic skill, and their development and (b) to propose tests of that theory with gifted, average, and mentally retarded children.

The theoretical challenge is to answer questions like these: How do children acquire and use effective strategies and large funds of knowledge? How do general uses of strategies and knowledge relate to people's awareness and control of their problem solving? An answer is that general strategy use depends on metacognitive understanding of problem solving and on executive cognitive routines for monitoring and controlling knowledge and strategies. How are academic skills acquired? An answer is that executive monitoring and control that solve difficult and novel academic problems also enlarge children's base knowledge or change its representation, add strategies to children's repertoires, and create new metacognitive understandings, thereby increasing children's academic skill, as can theory-guided instruction.

In my presentation I will: (a) distinguish in principled way between general strategy use and academic skill, (b) spell out previously unspecified theoretical relationships among knowledge, strategies, metacognitive understanding, and executive routines, (c) propose experiments to test my theory about general strategy use and academic skill, and (d) propose experiments to test the theory's implication that it is possible to increase academic skill of all children, most of all children who are not gifted. In the end, I will propose ways to increase the number of academically skilled children and to make gifted children more academically skilled.

An Assessment of Attitudes about Rural
Schools and Programs for Gifted

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Abstract

The purposes of this presentation are to: 1) disseminate the results of three research projects which focused on attitudes of rural gifted children and attitudes about programs for gifted and 2) discuss the implications of these research findings on the life span of gifted individuals. The three projects were completed as part of Masters degree requirements in the Gifted, Talented, Creative Program at Arkansas State University.

The first study evaluated 54 fourth, fifth, and sixth grade self-contained gifted students' attitudes toward school to determine if significant attitudinal differences existed for subgroups of this sample based on gender and grade level. The results of this study indicated that the older students of rural school districts were significantly more positive about school than their younger counterparts. No attitudinal differences were noted on the basis of gender or grade.

The second study compared attitudes about school of 35 gifted and 109 regular fourth, fifth, and sixth grade students in two rural school districts. Gifted students exhibited significantly more positive attitudes toward school than the students enrolled in the regular classroom. No evidence of attitudinal differences was found based on the grade level of the subjects.

The final study surveyed regular classroom teachers with regard to their attitudes toward programs for the gifted in six randomly selected rural schools. Additionally, the 55 surveys of elementary teachers were compared with 27 surveys completed by high school teachers. Based on the results of the survey, no significant differences in attitude existed between the elementary and high school teachers with regard to programs for the gifted. In general, regular teacher attitudes toward gifted programs ranged from neutral to mildly favorable on a five point rating scale.

Using these studies as pilot data and the existing body of research on attitudes pertaining to rural gifted students, the hypothesis could be made that positive attitudes toward school in these rural areas continue to favorably impact gifted individuals with regard to their performance in academic, vocational, and professional endeavors. Testing this hypothesis would require extensive longitudinal research regarding the relationship between attitude and performance throughout the life span. The research would of necessity include larger samples of regular and gifted youth and classroom teachers.

Social Competence, Self-Esteem, and Parent-Child
Time and Interaction in an Advantaged Subculture

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Abstract

Over the past decade, findings from an on-going longitudinal study at the Brigham Young University Early Childhood Laboratory have shown relationships between program and family variables and a variety of outcomes in preschool children with an elevated probability of later being identified as gifted (Draper, Larsen, Harris, & Robinson, in press). Data from a current wave of the larger longitudinal study was designed to more closely examining the importance of family variables. Interrelationships between family demographics, family emotional climate, parental time and support behaviors, and child social competence, self-esteem, and behaviors with the parent were examined.

Forty-seven preschool children (26 boys, 21 girls) and their parents served as subjects. Virtually all of the families had both parents present in the home. The families were ethnically diverse, though the majority were anglos. Most of the families were above the regional average in income. Virtually all had parents who had attended at least some college, and most had parents with at least one college degree. Data from parent interviews and testing suggested that as a group the children would be considered healthy, well adjusted, and intelligent (average IQ = 124).

Family demographics, including parental education, socio-economic level, and family size, were obtained in a questionnaire filled out by either parent. Estimates of the one-on-one time spent with the child were obtained in biweekly reports filled out by each parent. Family emotional climate was measured using the Georgia Family Q-Sort which is based on video taped observations of parents and children working on a block building project (Wampler & Halverson, 1989). Parent-child interaction was measured using a videotaped picture book test (Whitehurst, Falco, Lonigan, Fischel, DeBaryshe, Valdez-Menchaca, & Caulfield, 1988). Social competence was measured using an observational measure of children interacting with adult teachers and preschool peers (Levine, Elzey, & Lewis, 1969). Interview and participation measures were used to assess the children's self-esteem (Larsen & Leigh, 1977).

A series of multiple regression analyses were conducted to clarify the relationships between the variables (See Figure. All $p < .05$). These analyses indicated that the time the mother spent with the child in one-on-one activities was related to the number of questions she asked the child during the picture book task, and that the number of questions was in turn related to the child's willingness to engage in conversation with the parent. The observation that children talk more with mothers who ask them lots of questions was not surprising.

Paternal praise was also related to the child's willingness to engage in conversation and also to the child's self-esteem. One unexpected finding was that fathers with larger families tended to give more praise to their children than did fathers with smaller families. Very likely this is related to the local subculture's prizing of larger than average families which previously has been shown to reverse commonly observed family-size relationships (Galbraith, 1982).

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Family affect was positively related to child social competence, but negatively related to the number of requests the child made of the parent during the picture book task. Perhaps where family affect is negative bright young children expend energy seeking to clarify prior to acting. Alternately requests in the face of negative affect may represent a dependent form of attention seeking that has been observed in children where social circumstances are less than optimal (Zigler, 1971).

It is argued that even in families where the intellectual and achievement prognosis for the children is excellent, attention to social and affective factors by the parents can further optimized development (Csikszentmihalyi & Csikszentmihalyi, 1988).

Helping Families of Gifted Children Interact with Schools:
A Life History Approach

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Abstract

A person's family has a dramatic impact on that individual's entire life. The relationships of the family member with one another directly influence the members' interaction with all others. One of the most important settings for interactions outside the family is the school; for the family of a gifted or talented child, it can be a setting fraught with misunderstandings and frustration. How the family wrestles with and solves problems encountered at school is largely determined by the parents' experiences and the meaning those experiences bring to the new situation. Life history research appears to be a method that helps parents understand their beliefs and prepares them to approach and respond more effectively to school personnel. This research-in-progress uses qualitative methodology, grounded in the theoretical underpinnings of phenomenology, to discover the genesis and importance of parents' beliefs and attitudes about school, giftedness, expectations, and their children. Early analysis suggests that through the life history process parents gain understanding and acceptance of themselves and their children, paving the way for more productive interaction with the school. It is also posited that this process of personal inquiry modeled by their parents, teaches children valuable problem-solving skills and strengthens their internal locus of control.

Determinants of Underachievement Among Gifted and Non-Gifted Black Students

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Abstract

Theoretical Framework

This study examines the proposition that social, psychological, and cultural variables are linked directly to the academic underachievement of Black students in an urban school district. Also examined is a paradox of underachievement, defined as a discrepancy between Black students' beliefs regarding education and their actual achievement or performance in school. The paradox apparently results from a discrepancy between the positive attitudes Black students hold about education and their low achievement in school.

Few studies have looked beyond family and socio-economic demographics to examine how other variables influence achievement among Black students. And no studies have been designed specifically to assess underachievement among those Black students identified as gifted. Such studies are essential in that so many factors can limit, inhibit, and otherwise pose barriers to Black students and their school achievement.

It is generally accepted that underachievement (manifested by poor grades, lack of effort, dropping out of school, or otherwise not reaching one's academic potential) is a serious problem among students in our schools, particularly among those in urban areas. The statistics on the number of students who drop out of school are alarming indeed, and they highlight the malaise in the educational milieu. Some schools report epidemic numbers -- drop-out rates of 30 to 80 percent. Moreover, A Nation at Risk (National Commission on Excellence, 1983), reported that as many as 20 percent of the dropouts are gifted. Irvine (1990) reported that African Americans, particularly poor Black students, are overrepresented in the ranks of dropouts.

In short, although underachievement has been described and researched as a category established by performance-based assessment strategies, less often has underachievement been examined from an attitudinal perspective--from the perspective of Black students themselves. Given the myriad forces that contribute to underachievement among gifted Black students, it seems appropriate to examine the students' perspective on the variables that may influence their underachievement. To what extent is underachievement shaped by social factors? psychological factors? cultural factors? support for the American achievement ideology? or a combination of these variables? How pervasive is a paradox of underachievement among the Black students sampled, including those identified as gifted?

Procedures and Methodology

The researcher surveyed urban Black students identified by their school district as "gifted," "above-average," and "average." Later, the students were grouped as achievers and underachievers based on achievement variables (self-report of effort, teacher report of effort, and grade point average). The subject pool consisted of 148 fifth and sixth graders who attended elementary schools located in an urban school district in Northeastern Ohio. Students were interviewed individually during school hours by trained interviewers. Interviews lasted 20 to 30 minutes.

Instrumentation

A series of Likert-type items were used in the survey questionnaire to measure the degree of agreement and disagreement relative to the social, psychological, and cultural issues. Items were coded such that the higher the points, the more positive the respondent's perception (strongly agree = 4, agree = 3, disagree = 2, strongly disagree = 1). Conversely, the lower the score, the more negative the response or attitude. The instrument also contained a demographic section and six attitudinal scales and subscales.

Major Findings

Results suggest that the majority of the students, including those identified as gifted are underachievers. The findings point to a paradox of underachievement in which African-American students unequivocally accept the American achievement ideology, yet do not achieve at a level commensurate with such support. The paradox was particularly evident among average students and the underachievers rather than achievers. In addition, the psychological factor was found to contribute most to underachievement or lack of achievement motivation among the Black students sampled. The determinants of their respective paradoxes are discussed in detail.

Differentiated Assessment of Self-Concept: Understanding the
Diversity and Growth of Talent in Creative Domains

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Abstract

Existing self-concept instruments clearly do not address the domains and dimensions of self-understanding which are relevant to many gifted students. In order to design more appropriate instruments, one must first integrate the various philosophical stances and resulting empirical products of those who have operationalized self-understanding with the intent to measure it. This paper reviews this literature and connects it to current personality theory and research regarding normative, idiographic, and idiothetic measurement techniques. This latter body of work provides the theoretical foundation for the future development of self-concept instruments through which more valid self-referent information may be obtained.

The Long Term Development of Giftedness and High Competencies
in Children Enriched in Language During Infancy

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Abstract

Infants are remarkably responsive to variations in the quality of language experiences they encounter in early development. They can easily learn the different components of language, the sounds, words and syntactical dimensions, through short-term learning experiments in the laboratory. Studies in homes and day care reveal how much young children from all educational backgrounds vary in their early linguistic and cognitive competencies according to how well parents and teachers interact with them in using language. There is also a great deal of early intervention research with children from impoverished circumstances underscoring how early cognitive enrichment, heavily concentrated on language, enhances children's language and cognitive skills over the short-term. All of this research, however, suffers from certain limitations.

Short term studies in the laboratory on bits and pieces of language say little about how much experience can shape children's general linguistic and cognitive competencies, even in the short term. Correlations between variations in experience and variations in children's development, suggest that many children may be shortchanged in opportunities to realize their potentials, but correlation studies need verification through systematic educational efforts. And finally the impressive short term enhancement of skills in impoverished young children through systematic educational effort largely fades through their later debilitating experiences in the same poor circumstances to which they are returned once the year or two of special educational effort is terminated.

But what would happen if systematic educational enrichment were attempted with young children living in relatively salutary social and economic circumstances? The study reported on today has attempted to do just that. The original educational effort undertook to provide cognitive enrichment during infancy to children from generally stable but diverse socioeconomic, educational and ethnic backgrounds. The data presented here furnish expanded long term follow-up information on 39 of 44 children whose largely college educated parents were successfully guided in enriching their children's language in cognitively oriented, socially interactive play and child care activities during infancy.

In preliminary results 24 children (62%) are in gifted/advanced programs (compared to an expected 4.8%) and from 22 to 36 (56% to 92%) have high grades, are intellectually independent, excellent readers and writers, and are skilled in learning languages, math and science. Most are also well balanced socially and have diverse interests, including sports and the arts. Girls and boys are about equally well skilled academically, though girls are generally more verbally skilled, while boys are somewhat better in math, though girls are in science. Early enrichment, centering on language, may apparently launch a process of development that equips the child in a supportive ecology to maintain an expanding process of cognitive learning and development, enabling higher proportions of children than expected to realize their potentials.

The Power Gamesmanship Tactics of
Emotionally Disturbed Gifted Children:
Four Case Studies

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Abstract

This paper focuses upon the psychosocial causes of academic underachievement as revealed by longitudinal case studies of four gifted individuals who, in their youths, played maladaptive roles in dysfunctional families and continued to play out these game roles in adulthood.

Parental injunctions became a relentless influence in the life of each of the individuals. The one played a "Blast them down with your Light" game, while another played "Drunk and Proud" as he obeyed the DON'T THINK...DRINK parental injunction. The third, suffering delusions of grandeur while he failed at one job after another, played the "I'm Superman" role in response to his mother's DON'T THINK...BE NOBODY injunction. Pretending to be a man of steel suffering no pain at all, he was really a man of straw with a broken heart. The fourth cast himself in the role of helper/rescuer/savior as a response to the DON'T THINK...SUFFER parental injunction.

Only one of the case studies has ceased the game and begun to recuperate. The other three continue in their emotional disturbance, playing out maladaptive games by which they are attempting to recoup the power that they lost in childhood. In their power gamesmanship response to life's challenges, they are using their talents and gifts only for pathological purposes as each seeks to self-destruct.

Suggestions for future research include: the power theme in addictions, recognizing and "catching" negative roles in gifted children so that remediation can be undertaken, cultural taboos against intelligence and creativity and difference, the family triangles that create scapegoats, the mother's role of high priestess who judges--vis-a-vis cultural norms and taboos--the fitness of a child to live, the father's role of absentee deity in the dysfunctional family triangle, and oneupmanship game-playing as a potential addiction of the intellectually superior individual.

Development of Giftedness Among Siblings:
A Case Study of Differences and Familial Microsystems

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Abstract

Environmental influences affecting development were once thought to act mainly *between* families. Recent studies show that within family differences act equally forcefully to bring about individual sibling differences. Dunn & Shatz found that children as early as two years monitor and react to parents' interactions with siblings (1989). Group dynamics and subsequent interactions within families as additional siblings are added create multiple, interacting microsystems within which individuals develop (Bronfenbrenner, 1986).

McCall (1984) demonstrated that IQ dropped 10 points during the 2 years after the birth of a younger sibling relative to singleton children. While these differences were no longer significant by age 17, results demonstrate a sibling's birth does affect immediate mental performance, and may alter long range development. Cornell and Grossberg (1986) showed that when gifted children were enrolled in gifted programs and a sibling subsequently enrolled, then compared with instances where a sibling was not also enrolled, adjustment problems occurred, primarily in children whose parents perceived them "less gifted" than their siblings.

A summer program for intellectually advanced preschoolers, established in 1985, has provided extensive data on 16-22 children identified each year through screening tests, parent questionnaires and observations by program teachers and researchers. Parents who enthusiastically enrolled first-born children often became hesitant and confused about their second-born child's ability, perceiving them as less bright or quite different in ability and style and then exhibiting reluctance to provide access to this program they believed had so enriched their first-born's life.

The purpose of this case study was to explore within the above families factors evolving with subsequent sibling births and examine implications for short and long term effects on cognitive, perceptual, and social development of siblings. Family interview data is integrated with the data described above and preliminary analyses of emerging cognitive styles (Esther Katz Rosen Symposium, Haensly, 1992).

Assessment of Young Gifted Children: Performance Based or Standardized?

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Abstract

Objectives

Early identification and educational intervention for young gifted children has been shown to be important in the maximization of their abilities (Hollinger & Kosak, 1985; Bloom, 1985). The objectives of this research are as follows:

1. To develop a developmentally appropriate way to assess young gifted children.
2. To assess young gifted children using a broad definition of intelligences based on the theory of multiple intelligences (Gardner, 1983) and characteristics of giftedness.
3. To compare the results of performance based assessment with the results of standardized assessment.

Theoretical Framework

Piaget's (1963) means of assessing children's learning, Gardner's (1983) research on multiple intelligences and the characteristics of young gifted children (Lewis & Louis, 1991; Parke & Ness, 1988) were used to develop a performance based assessment model consisting of observations of children's interactions with the environment in learning centers that were developed around the multiple intelligences and characteristics of giftedness.

Methods

Analogue observations of young children's interactions with concrete materials were done by trained and experienced teachers. After analysis of this data, specific children were admitted to an academic year program for gifted students and their success monitored. Each of these students then received a battery of standardized assessments. This data will be compared with the performance based data and conclusions drawn. These children will also be followed over time as they are students in a private school for gifted children - ages 3 through 14.

Data Source

The performance based assessment model was used successfully to identify gifted abilities in young children. Clear profiles of giftedness in individual children emerged during the compilation of data process. As this research is still "in process" comparison to standardized data will occur during fall 1992 and winter 1993 (Research objective 3).

Educational Importance

The use of a performance based assessment model has the capability to identify gifted abilities in young children thereby allowing the early opportunity for appropriate placement. The comparative information, as well as the longitudinal data, may be useful in further developing identification models and methods appropriate for use with young gifted children.

The Hollingworth Longitudinal Study:
Early Predictors of Life Achievement Patterns

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Abstract

Ten years after the Terman study, groups of gifted children were identified by Leta S. Hollingworth and placed in qualitatively differentiated programs in P.S. 208, P.S. 500 and P.S. 165 in New York City. Unlike the Terman group, by and large from advantaged families from California, the Hollingworth group included some low income and immigrant children with a variety of backgrounds representational of the melting-pot character of New York City.

The original proposal of this study was an attempt to parallel the most recent Terman follow-up by the distribution of the adaptation of the Terman questionnaire updated by Sears of Stanford University to the group identified by Hollingworth. This paper concentrates on that portion which relates to the Hollingworth group.

Establishment of Hollingworth's philosophical basis for the curricular structure is followed by details of the mechanics of tracking the participants and recapitulation of information process methods. Elements of the study are reviewed. These are delineated by the questionnaire and geared to the Terman code. The initial analysis of selected data includes the six principal categories: personal, educational, vocational, avocational, achievement and adjustment/fulfillment and incorporates untabulated response with attention to sex differences and societal change in the intervening years.

The following account concentrates on the Hollingworth group and includes both material from the original class memoirs, recently discovered, and the personal reflections of the students, some of whom are in their late seventies. This lends substance and depth to the quantitative data and provides a retrospective, enriched view of the influence of early curricular intervention on adult development over the life span.

Ten Cross-Cultural Case Studies of Giftedness in a Third World Setting

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Abstract

The purpose of the case study is to provide an intimate, knowledgeable point of view from inside a situation or set of circumstances too complex for empirical analysis or other experimental strategies. The case study explains, describes, and explores (Yin, 1984) the real-life context where there is a need to understand a societal group, or a group of individuals, in depth.

According to Yin (1984), the case study:

... allows an investigation to retain the holistic and meaningful characteristics of real-life events -- such as individual life cycles, organizational and managerial processes, neighborhood change, international relations, and the maturation of industries.

(Yin, 1984, p. 14)

Because Ebeye is enmeshed in a political limbo complicated by cultural conflict, poverty, poor health and sanitation conditions, and substandard educational facilities, the application of the case study technique is particularly appropriate. These case studies offer strategic exploration which illustrate the causes and outcomes of an educational intervention program designed to optimize the innate capability of the individuals involved. In this respect the case studies enable the researcher to determine the interactive elements which produce behavioral patterns influenced by inner-directed tensions and outer-directed circumstances which encompass socio-economic circumstances, cultural frames of reference, and the specific program. The technique enables the researcher to exercise flexibility and judgement, and to attain insight within a broad spectrum of options, thus providing depth and dimension within a humanistic framework.

With this in mind, ten cases were selected which typify both the pathology arising out of cultural and socio-economic conditions, and the character traits which are more or less present throughout this group. In addition, cases were selected with a view to the ethnic mix which gives Ebeye its distinctive character.

Comparison of Narrative Language Abilities in Two Groups of Gifted Adolescents:
Gifted/LD and High-Achieving Gifted

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Abstract

The narrative (i.e., story-telling) abilities of gifted children with learning disabilities have received little attention from child-language investigators. As a result, little is known about the narrative abilities of this subgroup of the gifted population. Despite evidence that learning disabled (LD) children have significant difficulties processing and formulating narratives (MacLachlan & Chapman, 1988), few investigators (Ganschow, 1986; Weeks, 1974) have extended their research to include gifted children with learning disabilities. The purpose of the present paper is to report the results of a recent investigation designed to compare narratives produced by two groups of gifted adolescents: gifted/LD and high-achieving, gifted students. The study involved 20, 13-year-old, 8th-graders identified as gifted. Ten of the children met criteria for gifted/LD and the other ten met criteria for gifted/achieving. Each subject was required to spontaneously generate two narratives (oral and written) and retell two narratives (oral and written). Narrative structure and complexity was examined using story grammar analysis (Stein & Glenn, 1979). The results of this study will be shared and discussed from a synergistic and variable perspective of language development.

Examining Factors that Contribute to Success in an Early College Program:
The Simon's Rock Experience

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Abstract

The problem of a split developmental course can become quite acute in mid-adolescence. The unique intellectual and emotional needs of this age group often go unmet within our secondary schools. Nor have early entrance programs at colleges uniformly provided appropriate intellectual and social climates.

Simon's Rock College was founded in 1964 to specifically address this problem. The college challenges the rigidity of the nation's current lockstep educational structure which prescribes four years of secondary school prior to college admission. Since opening in 1966, Simon's Rock has enrolled over 2400 students, most of whom matriculated at age 16.

Research initiated at Simon's Rock in the 1970's under a Carnegie Foundation grant suggests that there are key structural components to a program which would respond appropriately to the needs of gifted mid-adolescents. These components include academic strategies that take into account the younger students' critical thinking skills, epistemological stance, learning style, as well as moral, ego, and cognitive developmental stage. Class size, the nature of homework assignments, advising, and the role of a general education core curriculum were carefully considered in the 70's research. Current research continues to focus these components. A longitudinal study is planned to follow-up on the students after 10 and 15 years.

An early college entrance program's social climate must balance the mid-adolescent's need for autonomy with his or her need for "connection." Current research at Simon's Rock examines the hypothesis that a student who thrives academically as an early entrant also has or desires the ability to initiate and sustain meaningful relationships with the adult community. This may in fact be the central factor in the success of mid-adolescents on a split developmental course. Our research is examining the social network of the 1992 Simon's Rock freshman class and will chart the changes in networks over two years.

Religious Orientation Across the Lifespan:
Gifted individuals within the theoretical framework

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Abstract

In an attempt to better understand the religious development of gifted individuals across the life-span, an extensive review of the literature was conducted. It was anticipated that researching religious development in the gifted and talented population would contribute significantly to the field's current knowledge base by searching beyond moral development to the more metacognitive constructs inherent in religious development. Concepts such as stages of faith, religious judgment, deity imagery, transcendence, and conversion were included in the review. This broad, conceptual focus allowed for an inclusive view of religious development steeped in a multicultural orientation.

The first goal of the review was to establish the current theories of religious development across the lifespan for the population in general. Special emphasis was then placed on the application of the theories for specific subgroups of individuals within various age-stages. Finally, the impact of the theories from a gifted a talented point-of-view was addressed.

As a result of this investigation, specific recommendations for a research agenda addressing the religious development of gifted individuals were formulated. Promising methodological procedures for obtaining data were included in the findings. Designs suitable for adaptation and replication to a population of gifted individuals were of special interest.

Evaluating the Life-Changing Experiences
in an Academically Gifted Program

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Abstract

The study represents an ongoing analysis of data initially collected from an extensive needs and evaluation survey distributed to over 3,342 students, parents, teachers, counselors, and administrators associated with an academically gifted program. The program was initiated in 1976 with 176 students which expanded to include more than 3,000 students in 1992 served by approximately 200 teachers. One major objective of the study was to evaluate the overall developmental experiences, program impact, and attitudes associated with program participation. Various black respondent groups evaluated dimensions of the gifted program including identification procedures, administrative placements, communication links, special education procedures, teacher certification, and perceived teacher and program impact and effectiveness. The participating black respondent groups included parents with students in the program, teachers of the academically gifted, counselors in schools having gifted programs, administrative staff members, and identified high school students. The perspective for the questions and interviews designed to collect this data came from various respondent groups evolved over a two-year period of experimentation with various formats. A number of committees revised the research design and instrumentation with pilot studies and further input. Finally, a select committee of parents, teachers, and staff approved the longitudinal study.

Life span research in the field of gifted and talented education reveals that results are most useful when the responses can be obtained from a variety of data sources, over a period of time. The report combines the data from the results of all five black respondent groups.

The most important questions selected by the school committee focused on student participation, home-school communication, and meeting the students' needs. Results indicated that greater effort should be given to the issue of minority recruitment and qualification since roughly half of the respondents did not feel that minority participation in the program had produced any lasting change in the screening and identification system. The communication links between home, school, and students were assessed positively by all participants. The teachers in the academically gifted program were viewed as successful in meeting the needs of the students. African-American teachers specifically were cited as an important resource for the academically gifted program. The program was evaluated overall as meeting the needs of the minority student.

Early Mentor Relationships in the Lives of Eminent and Creative Adults

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Abstract

Numerous studies have sought to uncover early social influences that predict and correlate with adult eminence. For the most part, they tend to focus on the role of parents with respect to academic progress and career aspirations. The complexity and diversity of the lives of eminent and creative adults suggests the need for understanding how other significant social relationships influence the development of ability and talent in young people. The present research is part of a larger research endeavor aimed at understanding the personal histories, current attitudes and work habits of older eminent individuals who have made significant contributions to a field. In particular, the present study focuses on how information about the domain and field is transmitted to young people via mentor-apprentice relationships. Both the individual's previous personal experiences with mentors as well as their current attitudes pertaining to the transmission of information to young people in the field are being explored. The primary source of data is a semi-structured two-hour video-taped interview with highly eminent and creative adults over 55 years old. Subjects include both men and women from one of four areas of expertise including Natural Science, Social Science, Arts and Humanities, and Business, Media and Politics. Currently, approximately two-thirds of the interviews have been completed. Although many of the significant influences and experiences expressed by these unusual eminent individuals may be relatively idiosyncratic, it is expected that the narrative accounts may reveal some general themes and experiences that can be documented and systematically identified. Hence, while much of this work is exploratory and qualitative in nature, basic analyses of specific variables, behaviors and experiences discussed in the interviews will be done with a computerized coding system currently being developed. Similarities and variation based on specific disciplines, training practices, learned working styles, personal characteristics, needs and values is being explored. An examination of the ways early experiences with adult teachers and mentors hinder or foster the personal and professional development of eminent individuals by influencing particular choices, decisions, and personal attitudes concerning their abilities, goals and aspirations may help us discern the personal, educational and professional value of mentor-apprentice relationships.

Families of the Gifted: Cradles of Development

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Abstract

Families are one of the most important influences on the lifespan development of the gifted (Bloom, 1985; Olszewski, Kulieke, & Buescher, 1987). When talent development is viewed from an eco-systemic perspective, the family emerges as one of the most important systems in the talent development process (Feldman & Goldsmith, 1986; Jenkins-Friedman, 1991). Talents often emerge first in the family context (Bloom, 1985), and families can play a substantial role in the development of talent (Radford, 1991).

The purpose of the paper is two-fold. First, existing research on the characteristics of both functional and dysfunctional families of the gifted will be reviewed. Areas that will be considered include family values; family relationships; unique family stressors; and interactions with other systems such as schools, neighborhoods, and peer networks. Second, suggestions will be made for future research on families of the gifted from an eco-systemic perspective in the following areas: (a) the characteristics of families of the gifted, (b) the role of the family in facilitating the development of talent, (c) the role of the family in facilitating the emotional and social growth of gifted and talented children, (d) family-school relationships when a child is gifted, and (e) family counseling with families of the gifted.

Teachers as Role Models of Creative Productivity:
A Longitudinal Study in Progress

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Abstract

Research has heretofore concluded that teachers of the gifted possess a collection of characteristics. Lists of traits like maturity, inventiveness, and a sense of humor have been found to contribute to instructional success in gifted education (Baldwin, 1977; Dorhout, 1983; Dubner, 1980; Kathnelson & Colley, 1982; Lindsey, 1980; Maddux, Samples-Lachmann, & Cummings, 1985; Maker, 1975; Newland, 1976; Story, 1985). In addition, lists of competencies have included knowledge of higher level cognitive techniques, ability to adapt curriculum to learners, and facility for developing intense relationships with others through excellent communication skills (Drews, 1976; Seeley, 1979; Whitmore, 1980; Wyatt, 1982).

Unfortunately, while such lists of characteristics and competencies may assist schools and universities for selection purposes, they fail to provide sufficient details for instigating school curricular improvements through selection of adroit teachers. The use of "list logic" does little to guide programs in the instigation and implementation of positive school and curricular change (Barth, 1986).

Several previous studies by Olenchak (1989, 1990, 1992) have examined behavior patterns among 45 gifted program teachers who were judged by peers to be outstanding. Findings indicated that each of the teachers maintained a mental image of a teacher with whom the subjects had been students themselves. Moreover, using reflective practices, each subject viewed that teacher image as a role model of creative productivity in the classroom upon which to base adjustments in their own teaching.

The current longitudinal investigation was initiated under the auspices of a 1990 Lily Endowment grant to determine the degree preservice teachers could ultimately excel as teachers of the gifted after involvement in an intervention. The intervention, a modification of the Schoolwide Enrichment Model (Renzulli & Reis, 1985a) that was intended for K-12 classrooms, employed a variety of activities in which the university instructor modeled creative productive behavior, with constant opportunities for preservice teachers to nurture their own creative productivity. As a result of analysis of student products, 42 high quality products emerged from a pool of 166. This rate of creative productivity was considered high based on other studies in which outcomes of Schoolwide Enrichment has been examined, but it was particularly so considering the types of products typically obtained from undergraduate college students.

The present investigation, which is still in progress, traces the continuing creative productivity among 6 of the 42 students judged to have demonstrated exceptional creative productive performance in the original study. Of these 6, 3 students are still enrolled as undergraduates, while 3 are now practicing teachers in regular education. The intent of the study is to assess over time the creative productive behaviors of these 6 subjects and their impact as role models on the creative productivity among children in their own classrooms.

Social Giftedness in Childhood

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Abstract

This paper will be a report of research in progress. The research focuses on the identification of interpersonal expertise, or "social giftedness," using as a theoretical framework Case's (1992) stage theory of cognitive development. Case's theory acknowledges both domain-specific and domain-general aspects of development and thus addresses the need to define the roles of both general cognitive strategies and domain-specific knowledge in gifted children's thinking (Horowitz & O'Brien, 1986; Rabinowitz & Glaser, 1985). It would appear that giftedness may involve specific "encapsulated" abilities which can develop very rapidly as well as general age-related understandings (Case, 1992; Fischer & Canfield, 1986; Fischer & Pipp, 1984; Porath, 1988, 1992).

Horowitz and O'Brien (1986) emphasized that it is crucial to begin to research social intelligence in order to understand its roots and the conditions which foster it. Two projects are in progress which address this research focus. The first involves naturalistic observation of 3- to 5-year-olds in a child study setting. Observations are focused on identifying those children who are exceptionally skilled socially, for examples, the leaders, facilitators, and nurturers (Krechevsky, 1991) and what situations/interactions elicit these behaviors. Tasks to determine these preschoolers' levels of social understanding will also be administered. The second project involves the collection of developmental and social skills data from children aged 6 to 12 and their teachers and parents. Preliminary results suggest support for a conception of social giftedness which includes general, age-related social understandings, qualitative differences in those understandings which indicate remarkable sensitivity, and "encapsulated" advanced social skills.

Taking a life span perspective, it is speculated that the form that social giftedness takes in childhood and the influences which impact upon it (teachers, parents, peers) may have profound implications for its ultimate realization and contribution to society.

Social Influences on Creativity in the Lifespans of Gifted Individuals

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Abstract

We are nearing the completion of a study of creativity in later life. Our sample currently consists of approximately 60 individuals over the age of 50, taken from four fields of activity: natural science, social science, politics and business, and arts and humanities. The two-hour interview format covered a wide range of issues which may have influenced the creative process at different points in the lifespan. In this paper, we will focus on changes in the creative process through the lifespan, with an emphasis on the social context of the creative individual. Our data indicate that social factors play a significant role in the successes of creative individuals. These factors vary through the lifespan, and include parents and mentors in early life, professors during college and graduate school, and colleagues and students during the most productive years of the career. In particular, we have found that the impetus for major career changes often originates in the social environment, through mentors and professors, and through colleagues later in life, and also in broader sociohistorical factors, such as World War II. Our paper will summarize the commonalities in lifespan stages and changes within our sample.

Early Influences in the Development of Artistic Talent:
An Analysis of Visual Perception and Autobiographical Memory in Artists Across the Lifespan

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Abstract

Schlewitt and Burns (in press) have recently demonstrated differences between novice artists (upper-level art majors) and nonartists on two tasks measuring visual perceptual abilities. One task measured "perceptual flexibility" which was defined in terms of the ability to switch the basis for classification from overall similarity (i.e., similarity based on wholistic properties) to classification based on dimensional similarity (i.e., similarity based on shared dimensional components). A second task examined performance on the well-established Hidden-Figures Test and measured "field-independence" (i.e., the ability to extract a simple figure embedded within a highly complex figure). Artists were found to be higher in both perceptual flexibility and field-independence as compared to a control group of nonartists.

A second study by Schlewitt and Burns (1992) examined novice artists' memories of their own talent development in an unstructured interview. In this study, a number of artists reported memories of early visual perceptual abilities in response to questions regarding 'how they knew they had artistic ability'. For example, one artist said, "First I thought that everyone could see and execute what they saw. I remember not understanding this and so it was at this point that I discovered that I was different." Such responses are similar to reports from a large-scale study of professional Canadian artists by Callaghan (1991).

Such research reports, taken together, suggest first, there exist important differences in the way visual information is perceived and processed by artists and nonartists, and second, artists may have recognized such perceptual differences early in development. The current research addresses these two issues and their possible role in artistic development. We are interested in discovering the kinds of perceptual experiences that artists cite as important in their artistic development, and the particular experiences that artists remember as pivotal in the recognition of their own artistic ability. In addition, we are interested in what aspects of visual perceptual ability may influence (1) an individual's perception of self as gifted, and (2) the decision to pursue a career in art.

The current study attempts to answer these questions by examining the performance of novice artists and professional artists both on the visual perception tasks of Schlewitt and Burns (1992), and on an extensive questionnaire regarding early artistic development. The goals of this study are first, to extend the Schlewitt and Burns (in press) findings to more established artists, and second, to examine in greater depth the relations between perceptual ability and autobiographical memory throughout the lifespan. The achievement of these goals will aid our understanding of the significance of visual perceptual abilities in the development of artistic talent.

The Gender of Genius:
Implications for Females of Male Conceptions of Abilities

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Abstract

From at least the 18th Century onward, the concept of genius has been gender laden. The word originally derived from the Latin "gens," a personification of the male familiar spirit, became increasingly connected with a masculine ideal of aesthetic production. Despite an androgenization of the creative force during the Romantic age at the beginning of the 19th century, European intellectuals saw creation as an exclusively male province. Women were considered genetically (ironically a word of the same root) incapable of sustained artistic creativity having that energy given to childbirth.

While feminist literature has evolved new notions of female creativity and aesthetics, the field of the education of the gifted and talented has made less progress. The literature in the field still confuses eminence and ability, still emphasizes male notions of cognitive and creative production, and still has a tendency to dismiss female behaviors in school and in adulthood as less desirable or even maladaptive. In addition, the field has adopted a model that portrays traditional female characteristics and ways of knowing as maladaptive. This has led to a deficit model of female productivity.

This paper will examine the implications of male assumptions of creativity on our field for identification and programming for women. It will provide examples of these assumptions present even in literature purporting to support equal treatment for gifted females. It will also address the importance of noting new notions in feminist criticism in the arts and literature for selecting and following females in longitudinal studies.

The Development of Creative Thinking

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Abstract

One theoretical problem in the description of creative thinking is the coordination of "stage" and "phase" approaches to development. In a Piagetian perspective, formal problem finding emerges late in the developmental period. As a consequence, formal creative thinking may not develop until adulthood (Arlin, 1975; Csikszentmihalyi & Getzels, 1988). In phase approach to development, expertise is considered a prerequisite to creative thinking. Consequently, creative thinking is believed to emerge after the transition from novice to expert (Resnick, 1987). To many psychologists, these perspectives seem to offer competing interpretations of the same phenomena, including creative thinking (Liben, 1987).

But are they alternatives between which we must choose? There are some research findings which suggest that the two approaches complement each other. First, recent research on the development of memory suggests that multiple phases of learning fit within each stage of development (Case, 1985; Means & Voss, 1985; Schneider, Korkel & Weinert, 1989). Phases of learning are sometimes (though not always) subsumed by developmental stages. Second, longitudinal and case study research suggests that some indicators of adult creative thinking emerge during childhood (e.g., Pariser, 1991; Torrance, 1984; Wakefield, 1992). Creative thinking appears to exist in some form comparatively early.

When we consider the development of creative thinking in light of these findings, the following model emerges. Cognitive skills develop in broad if uneven stages, with phases of thought within each stage. In the concrete operations stage, for example, we can find novice, intermediate, and expert concrete thinkers. Problem finding skills develop after expertise is achieved and coincide with the emergence of the next stage of thought. In this manner, perceptual problems become discovered as concrete operations emerge, and concrete problems become discovered as formal operations emerge. The coincidence of problem finding with the development of a new level of thought is not accidental, as a study of Piaget's early interest in concrete classification problems reveals (cf. Piaget, 1911/1977). Problem finding at lower levels of thought seems to foster the development of higher level thinking.

Some creative thinking, then, is characteristic of all children at certain phases in their development. What distinguishes the creative thinker is persistence in a problem finding mode beyond stage transitions.

Academically Talented Students in an Intensive Summer Program:
Reasons for Course Selection

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Abstract

Current concern regarding adolescents' scholastic performance in the United States has focused attention not only on adolescents' academic achievement, but also on their selection of courses as a first step in mastering new academic domains (for a review see Stocking & Goldstein, 1992). Stocking and Goldstein (1992) have found that females in an intensive summer program tend to choose history, language and writing courses, and males tend to choose mathematics and science courses, although no gender differences were found in achievement.

Our effort has been to understand motivational factors contributing to course selection in a sample of highly talented children. A subset of 12- to 16-year old students (947, 43% female) who attended one of two 1992 terms at the Duke University Talent Identification Program (TIP) Summer Residential Program (SRP) participated in this study by completing an end-of-course evaluation questionnaire. The SRP is a scholastic program held on the Duke University campus for 2 3-week terms. These students were initially identified through TIP's Talent Search, which invites seventh graders who score in the top 3% on their in-school standardized achievement tests to take the Scholastic Aptitude Test (SAT) or American College Test (ACT). Those who score in the top 6% on the SAT or ACT then qualify for admittance to the SRP at TIP.

Each student chose one SRP intensive class from a list of over 30 possible offerings. In this sample 70% of the students were assigned to their first choice class. For purposes of analysis, classes were organized into 4 categories: (1) math (comprising 37% of our subjects), (2) science (14%), (3) social science (39%), and (4) language (10%). At the end of their 3-week course students completed a one-page anonymous "TIP End of Course Questionnaire." Subjects indicated their motivations for selecting particular courses, as well as the most important reason for taking the class they did.

Girls and boys took different types of classes ($X^2_3 = 38.287, p < .005$), with course participation falling along traditional gender lines. The reasons students gave for course selection also differed according to gender. Females more than males enrolled in classes which they perceived as challenging, different from usual, not offered at school, and as making them more well-rounded. Males more than females selected classes because they thought they would do well in them. Two items in particular -- interesting course material and future usefulness of course material -- proved to be high frequency *and* high priority factors for both females and males in their course selection process, although boys tended to endorse usefulness more than girls.

Our results suggest that females in this sample may be more exploratory and less concerned with performance than boys. Also, the extremely high frequency with which both males and females took classes because the subject was interesting accords with the high degree of initiative and intrinsic motivation required for successful participation in the rigorous, fast-paced academic experience offered by the SRP. Thus, although students were drawn to TIP classes for a wide variety of reasons, intrinsic interest appears to be the outstanding motivator reported by these individuals.

Developmental Considerations in the Acquiring and Teaching of a Second Language:
Implications for Teaching the Gifted Child

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Abstract

Teaching a foreign language in the U.S. has become a struggling educational dilemma fraught with decades of failure. Even among programs for the gifted child consensus is lacking as to whether gifted children demonstrate second language competency that is commensurate with their intellectual skills. Additionally, attempts to predict successful second-language learning with standardized tests or to identify the characteristics of good second language learners through postdiction have proven to be unproductive. Equally problematic for identifying successful second-language learners are the results of investigations on universal grammar, input experience, first-language competence, and age of acquisition of the second language. Particularly productive are the results of investigations on methodological strategies based upon life span observations of first language learners and uninstructed second-language learners. The experimental results of these methodological strategies will be described and experimental results will be reported. These results have led to the formulation of several general cognitive strategies that appear to be essential for successful second language learning. They are: the silent period, non-linear learning, comprehensibility, and implicit processing. Finally, consideration will be given to the relevancy of the above findings for developing second-language programs for the gifted child and determining whether these general second-language learning cognitive strategies are appropriate for other content areas.

Verbal Giftedness and the Development of
Relativistic Thinking across the Lifespan:
The Piagetian Perspective and the Perry Scheme

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Abstract

Seventy years of intellectual development were examined cross-sectionally in subjects ranging in age from 12 years through 82 years old, using three measures of cognitive development (Piagetian-type situations; an instrument based on the Perry Scheme; and the PFPR Test [Worthen, 1991], a questionnaire for determining preformal, formal, or postformal-relativistic cognitive development).

Matched for gender, ethnicity, SES, physical health, and daily functional competence, 64 subjects were divided in four age groups of approximately two-decade spans: $N=16$ adolescents up through age 17; $N=16$ young adults ages 21 through 39 years old; $N=16$ middle aged adults ages 42-61 years old; and $N=16$ older adults ages 64 through 82 years old. Scores on a Wechsler Adult Intelligence Scale (WAIS; Wechsler, 1955) vocabulary subtest were used to determine verbal giftedness. Subjects scoring more than three standard deviations above the mean (i.e., a deviation IQ score above 145) on the WAIS were considered to be verbally gifted. Scores ranged from 105 through 170.

Chi square analyses comparing all gifted subjects to all non-gifted subjects indicated nonsignificant differences on the three measures of cognitive development. However, when age groups were compared, significant differences were found between the adolescent group and the adult groups. Moreover, significant differences were not found among the adult groups on these measures.

Results are interpreted as indicating that: 1) cognitive increases occur beyond the teenage years; 2) beyond adolescence, factors (such as experience, education, and vocation) other than giftedness probably increase in importance for continued intellectual and cognitive growth; and 3) as measured in the present sample, thinking and reasoning abilities do not necessarily decrease, even in older adulthood.

Career Development of Eminent Canadians

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Abstract

This presentation is submitted under category (2) Reports of completed projects. It will deal with the information gathered from the 375 individuals listed in *Who's Who of Canada* who responded to a mail-out survey designed to gather data on factors facilitating or hindering their career development. "The Survey of Eminent Canadians" is a self-report instrument developed specifically for this study after a comprehensive review of the literature on eminence and leadership.

Of the factors which emerged as being influential on outstanding career achievement, some are of the individual while others are external forces that exert influence upon the individual. Factors of the individual include intellectual abilities, particularly intelligence and creativity, educational achievement, personality variables, and how well one performs in the early stages of one's career. External factors include the most significant others in one's life such as family, friends and mentors, and the role of luck or fate.

The data will be summarized in approximately six to eight figures. Parallels will be drawn between the results of this study and the general literature on factors conducive to development of eminent achievement.